Stellingen

behorende bij het proefschrift

Device physics of polymer:fullerene bulk heterojunction solar cells
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1. The performance of PDPP5T:[70]PCBM solar cells with sub-optimal acceptor concentration is limited by the low, field-dependent electron mobility (Chapters 2 and 3).
2. Most of the current of PDPP5T:[70]PCBM solar cells with large phase separation stems from the region at the interface between acceptor clusters and the polymer-rich matrix (Chapter 3).
3. The formation of large acceptor domains is detrimental to the efficiency of bulk heterojunctions because it reduces the exciton quenching efficiency and deprives the surrounding mixed phase of acceptor molecules (Chapter 4).
4. Light intensity, active layer thickness, energy levels, charge mobilities and recombination strength determine the ratio of bimolecular recombination and extraction rates, and hence the fill factor (Chapter 5).
5. PTB7 is not intrinsically unstable when exposed to UV light; fast degradation occurs only in the presence of [70]PCBM (Chapter 6).
6. Besides an extensive use of renewable energy sources, the effort of researchers, governments and industry have to be aimed at a strong reduction of energy consumption.
7. The different meanings of the word "organic" in scientific and common language is a good example of how far apart these languages sometimes are.
8. Planning an experiment is like planning a chess move: experienced researchers, as well as experienced players, always think a few steps ahead.
9. It would be wise to start formulating these propositions before writing the first paper.